

U.S. Patent Application No. 09/630,121
Amendment After Final dated March 19, 2004
Reply to final Office Action dated October 20, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-6 (canceled)

Claim 7 (previously presented): The plank of claim 31, wherein said core is a rigid thermoplastic material.

Claim 8 (previously presented): The plank of claim 31, wherein said core comprises at least one thermoplastic material and at least one plasticizer.

Claim 9 (previously presented): The plank of claim 31, wherein said at least one plasticizer is present with the thermoplastic material in an amount of less than about 20% by weight of said core.

Claim 10 (previously presented): The plank of claim 31, wherein said at least one thermoplastic material is polyvinyl chloride.

Claim 11 (previously presented): The plank of claim 31, wherein said at least one thermoplastic material is a rigid polyvinyl chloride.

Claim 12 (previously presented): The plank of claim 31, wherein said core has a thickness of from about 5 mm to about 20 mm, a width of from about 2 cm to about 30 cm, and a length of from about 30 cm to about 130 cm.

Claim 13 (previously presented): The plank of claim 31, wherein said core has at least one cavity.

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Claim 14 (previously presented): The plank of claim 31, wherein said core has a series of paralleled cavities which are separated by said thermoplastic material.

Claim 15 (original): The plank of claim 14, wherein said series of cavities are rounded, triangular, or rectangular in cross-section.

Claim 16 (currently amended): The plank of claim 14, wherein each of said series of cavities have dimensions includes a dimension of about 0.3 inch by about 0.3 inch and ~~are~~ is separated by said thermoplastic material having a thickness of from about 0.05 inch to about 0.07 inch.

Claim 17 (previously presented): The plank of claim 31, wherein said core has at least one groove located on a side of said core.

Claim 18 (original): The plank of claim 17, wherein said core has a groove located on two sides of said core, wherein said sides are opposite to each other.

Claim 19 (original): The plank of claim 17, wherein said grooves have teeth located on the upper surface, lower surface, or both upper and lower surfaces of said grooves.

Claim 20 (previously presented): The plank of claim 31, wherein two sides of said core are tapered or have beveled edges, wherein said sides are opposite to each other.

Claim 21 (previously presented): The plank of claim 31, wherein said bottom surface of said core has at least two bottom feet or a series of co-extruded polymeric strips to raise said core from a sub-floor or substrate surface.

Claims 22-30 (canceled)

Claim 31 (currently amended): A thermoplastic plank comprising:

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a core comprising at least one thermoplastic material wherein said core has a top surface, a bottom surface, and opposing sides;

a digital printed design on said top surface of the plank;

at least one protective coating on top of said digital printed design.

Claim 32 (original): The thermoplastic plank of claim 31, wherein said protective coating comprises a polyurethane type coating with or without wear resistant particles in the coating.

Claim 33 (original): The thermoplastic plank of claim 31, wherein said thermoplastic material comprises polyvinyl chloride type polymers.

Claims 34-36 (canceled)

Claim 37 (previously presented): The thermoplastic plank of claim 31, wherein said thermoplastic material comprises at least one thermoplastic resin, at least one processing aid, at least one impact modifier, at least one lubricant, and at least one stabilizer.

Claim 38 (original): The thermoplastic laminate of claim 37, wherein said thermoplastic material further comprises at least one pigment.

Claim 39 (previously presented): The thermoplastic plank of claim 31, said plank having a substantially planar top surface, opposing sides, opposing ends, and a bottom surface, wherein said bottom surface has a plurality of channels formed therein, each of said channels extending longitudinally from one end of the plank to the other end of the plank.

Claim 40 (original): The thermoplastic flooring plank of claim 39, wherein said channels are substantially U-shaped.

Claim 41 (canceled)

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Claim 42 (original): A flooring system comprising a plurality of the thermoplastic flooring planks of claim 39 connected together.

Claim 43 (previously presented): The thermoplastic plank of claim 31, said plank having substantially planar top and bottom surfaces, opposing ends, and a series of elongate cavities between said top and bottom surfaces, each of said cavities extending from one of said opposing ends of said plank to another of said opposing ends of said plank.

Claim 44 (original): A flooring system comprising a plurality of the thermoplastic flooring planks of claim 43 connected together.

Claim 45 (previously presented): A surface covering comprising a plurality of thermoplastic planks of claim 31 joined together.

Claim 46 (previously presented): The surface covering of claim 45, wherein said surface covering is a floor covering that is a floating floor installation.

Claim 47 (currently amended): A floor covering comprising a plurality of thermoplastic planks, wherein said floor covering is a floating surface and wherein said thermoplastic plank comprises:

a core comprising at least one thermoplastic material, wherein each core has a top surface and a bottom surface, and opposing sides;

a digital printed design on said top surface of said core, wherein said digital printed design has a top surface and a bottom surface; and

a protective layer affixed to said top surface of said digital printed design.

Claim 48 (previously presented): The floor covering of claim 47, wherein at least a portion of said thermoplastic laminate planks are joined together by splines.

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Claim 49 (previously presented): The floor covering of claim 47, wherein at least a portion of said thermoplastic laminate planks are joined together by a bonding agent.

Claim 50 (previously presented): The floor covering of claim 49, wherein said bonding agent is tetrahydrofuran, methylene chloride, a ketone, or combinations thereof.

Claim 51 (currently amended): A thermoplastic plank comprising:

a core comprising at least one thermoplastic material, wherein said core has a top surface and a bottom surface, and opposing sides;

a digital printed design on said top surface of said core, wherein said digital printed design has a top surface and a bottom surface; and

at least one protective layer affixed to said top surface of said digital printed design, with the proviso that no backing layer is located adjacent the bottom surface of said core.

Claim 52 (currently amended): The thermoplastic plank of claim 51, wherein each core has a series of parallel cavities which are separated by said thermoplastic material, wherein the thickness of the thermoplastic material separating the outermost cavities is thicker ~~then~~ than the thickness of the thermoplastic material separating the innermost cavities.

Claim 53 (currently amended): A thermoplastic plank comprising:

a core comprising at least one thermoplastic material, wherein said core has a top surface and a bottom surface, and opposing sides;

a digital printed design on said top surface of said core, wherein said digital printed design has a top surface and a bottom surface; and

a protective layer affixed to said top surface of said digital printed design, wherein said at least bottom surface of the core is thermally treated.

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Claim 54 (new): The thermoplastic plank of claim 31, wherein no filler is present in said
core.